Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A method for expanding a RAID subsystem from a first array of disk drives to a second array of disk drives, the first array including a set of data disk drives storing old data and spare space, and the second array including the first array and at least one new disk drive, comprising:

initializing the spare space to all zero data;

distributing the old data among the set of data disk drives and at least one new disk drive while mapping new data to the spare space of the first array; and

copying, upon completion of the distribution, the new data from the spare space to the set of data disk drives and at least one new disk drive to enable concurrent expansion of the first array while accessing the old and the new data.

2. (Cancelled)

3. (Original) The method of claim 1 further comprising:

allocating the spare space among the first array of disk drives.

4. (Original) The method of claim 1 wherein the new data are mapped redundantly.

5. (Cancelled)

6. (Original) The method of claim 5 further comprising:

generating parity data for the initialized spare space.

7. (Original) The method of claim 1 further comprising:

initializing at least one new disk drive; and

generating parity data for the initialized new disk drive.

8. (Original) The method of claim 1 further comprising:

determining parity data for the new data from the new data and the old data.

9. (Currently Amended) An expandable RAID subsystem, comprising:

a first array of disk drives including a set of data disk drives storing old data and spare space;

a second array of disk drives including the first array and at least one new disk drive;

means for initializing the spare space to all zero data;

means for distributing the old data among the set of data disk drives and at least one new disk drive while mapping new data to the spare space of the first array;

means for copying, upon completion of the distribution, the new data from the spare space to the set of data disk drives and at least one new disk drive to enable concurrent expansion of the first array while accessing the old and the new data.

10. (Original) The subsystem of claim 9 wherein the spare space is distributed and initialized to zero.

11. (Original) The subsystem of claim 9 where the spare space is allocated to an initialized dedicated disk drive.

12. (Previously Presented) A method for expanding a RAID subsystem from a first array of disk drives to a second array of disk drives, the first array including a set of data disk drives for storing old data and containing spare space, and the second array including the first array and at least one new disk drive, comprising:

distributing the old data among the set of data disk drives and at least one new disk drive while mapping new data to the spare space, wherein the spare space is allocated on a dedicated spare drive of the first disk drive array; and

copying, upon completion of the distribution, the new data from the spare space to the set of data disk drives and at least one new disk drive to enable concurrent expansion of the first array while accessing the old and the new data.

13. (Currently Amended) An expandable RAID subsystem, comprising:

a first array of disk drives including a set of data disk drives for storing old data and containing spare space;

a second array of disk drives including the first array and at least one new disk drive;

means for allocating the spare space on a dedicated spare drive of the first array of disk;

means for distributing the old data among the set of data disk drives and at least one new disk drive ~~while~~ and for mapping new data to the spare space of the first array while distributing the old data; and

means for copying, upon completion of the distribution, the new data from the spare space to the set of data disk drives and at least one new disk drive to enable concurrent expansion of the first array while accessing the old and the new data.